

REMARKS

Status of the Claims

Claims 8-9, 12-13, 19-32, 34-40, and 42-45 are pending in this application.

Claims 8-9, 12-13, 19-32, 34-40, and 42-45 are rejected.

Claims 46 and 47 are newly presented. Applicants respectfully submit that the new claims do not add new matter and that support for the new claims 46 and 47 can be found in the specification and drawings.

Rejection of Claims 8-9, 12-13, and 19-45 Under 35 U.S.C. § 103(a)

Claims 8-9, 12-13, and 19-45 stand rejected under 35 U.S.C. §103(a) as being obvious in light of U.S. Patent No. 6,693,419 to Stauth et al. (hereafter "Stauth '419").

The Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection of claims 8-9, 12-13, and 19-45. Claims 33 and 41 have been cancelled, without prejudice. The Applicants respectfully request reconsideration of the rejections based on the following remarks.

Rejected Claims 8, 19-22, and 43 are all independent claims which include the limitation of the supervisor circuit changing the signals to a diagnostics range in response to an electrical failure in one or more of the sensor element or output circuits, and combinations thereof. Independent claim 9 includes the limitation of the supervisor circuit changing signals to a diagnostics range in response to an electrical failure and one or more of the sensor element, output circuits, or shared circuits, and combinations thereof. Applicants maintain that Stauth '419 does not teach or suggest these elements.

The Office Action states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the device in Stauth '419 to monitor

sensor elements and output circuits in response to electrical failure, mechanical failure, passing of magnetic articles and other such problems. However, the passing of the magnetic article near the sensor in Stauth '419 is part of the normal operation. Stauth '419 is directed to a Hall effect proximity detector which are known non-contact sensors that use a magnetic article to pass by a sensor and determine the operating position of a device such as a tooth on a gear. *See Stauth '419 at Col. 1, Lines 19-29.* The Examiner appears to be applying that the passing of the magnetic article near the sensor of Stauth '419 is some type of problem or mechanical failure. A review of the background of the invention and summary of Stauth '419 supports that the passing of the magnetic article near the sensor is not a problem or undesirable event. Furthermore, there is nothing in Stauth '419 that teaches or renders obvious a supervisor circuit changing to a diagnostics range in the event of a problem with the sensor element or the output circuits. Stauth '419 does not teach or suggest anything with relation to failures of the components much less moving to a diagnostics range.

A prima facie case of obviousness cannot be maintained when the proposed combination changes the principle operation of the device. *See MPEP 2143.01 citing in re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).* Modifying Stauth '419 to react to a failure of the sensor or output circuits and then change to a diagnostics range in response to the failures would require additional components or modifications made to the current components in order to first detect whether or not a failure is occurring and then provide components to move the device to a diagnostics range. Applicant submits that if the device of Stauth '419 were to experience such failures, the device simply quit working and would not change to a diagnostics range. First, Stauth '419 does not monitor the output circuits and the sensor element. Instead, Stauth '419 uses the POSCOMP output from the output circuit 64 to calculate a tracking signal that follows

where the DIFF signal from the sensor element 62 was at a given point of time in the past. See *Stauth '419 at Col. 4, Lines 31-54*. There is no diagnostic range; the signals just stop. For all of these reasons, Applicant submits that *Stauth '419* does not render rejected independent claims 8, 19-22 and 43 obvious. Removal of the rejection is respectfully requested since the prima-facie case of obviousness has been rebutted due to the fact that *Stauth '419* would require extensive modifications and/or rearrangement of components to render the claims of the present application obvious.

With this submission, Applicants submit new claims 46 and 47 which further distinguish Applicants' invention over the art. New claims 46 and 47 require that the sensing system have first and second output circuits which provide a signal to a controller. The connection of the first and second output circuits to the controller is explained in the Specification and it is also shown in Applicants' Figures 1 and 2. In the above noted Office Action on page 2, the Examiner has identified comparator 64 and comparator 68 as shown in Figure 3 of *Stauth '419* as being the respective first output circuit and second output circuit. *Stauth's '419* second output circuit 68 delivers a signal to a counter 78 via a XOR gate 74. In *Stauth '419*, the only output circuit which can be connected to a controller giving a POSCOMP signal is that provided by the comparator 64. Accordingly, *Stauth* only provides one outlet circuit which provides a signal to a controller. In sharp contrast, as described in the specification and that it is also shown in Figs. 1 and 2 of Applicants' invention, Applicants provide first and second output circuits 14 and 16 respectively which both provide signals to a controller 18. The above noted significant difference alone, further distinguishes the patentability of Applicants' invention as provided in claims 46 and 47 over *Stauth '419*. Additionally, for the reasons stated previously in regards to claims 8, 9, 12, 13, 19-32, 34-40 and 42-45,

Applicants' invention as defined by claims 46 and 47 is clearly distinguishable over the invention revealed in Stauth '419.

CONCLUSION

It is respectfully submitted that in view of the above amendments and remarks the claims 8-9, 12-13, 19-32, 34-40, and 42-47, are patentably distinguishable because the cited patent, does not teach, suggest or render obvious the present invention. Therefore, Applicants submit that the pending claims are properly allowable, which allowance is respectfully requested.

The Examiner is invited to telephone the Applicants' undersigned attorney at (248) 364-4300 if any unresolved matters remain.

Respectfully submitted,

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